

**Chapter 4**  
**A Geocentric Explanation:**  
**The Earth Must Be Stationary Existence**  
(A.D. 120 - A.D. 140)  
Ptolemy

**Introduction**

The second century Egyptian astronomer Ptolemy (a.d. 90-168) is credited with the creation of the elaborate mechanism by which he (and later astronomers) calculated the movements of the stars and planets and the moon around the earth. Ptolemy's most important work was completed early in his career. The selection presented here is excerpted from his earliest work, *Almagest*. Written originally in Greek, this work on astronomy was translated into Arabic in the ninth century, and in 1410 it was translated into Latin. While never completely unknown, its reappearance during the Renaissance buttressed Catholic doctrine on the centrality of human creation. Ptolemy's work reflected the virtually overpowering common-sense explanation for movement in the cosmos: the earth was stationary and everything else revolved around it (thus the popularity of Ptolemy's theory with Christian theologians). Ptolemy's astronomy was also connected to the classical philosophy of Plato and Aristotle, who had both theorized that perfection existed in the heavens while the earth was the locale of degradation and decay to which all natural things are subject. (This theory was also popular with Christian theologians.) As time went on, however, and more astronomical data were collected, Ptolemy's system was increasingly hard pressed to explain the erratic movements of planets and moons. In 1543 Nicolas Copernicus (1473-1543) suggested replacing the earth with the sun as the center of the universe; the math was instantly much easier and the predictions more accurate.

**Questions to Consider**

- On what does Ptolemy base his belief in the stationary status of the earth? Is this at all convincing?
- What proof do the geokineticists offer for their theory?

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*That the Earth Performs No Progressive Motion*

In the same way it will be proved by what precedes that the earth cannot make a contrary motion to the aforementioned lateral sides, or ever be displaced at all from its position in the center [of the universe]...The earth occupies the central position in the cosmos, and all heavy objects move toward it. ... If it had any one movement in common with the other heavy bodies, it would outstrip them all in its descent because its size is so much bigger. It would leave living creatures behind, and partly dense bodies floating on the air. For its part, it would swiftly drop out of the heavens, altogether. ...

For let us grant them what is unnatural: the lightest and least dense bodies [the stars] do not move at all...while the densest and heaviest bodies execute their own swift and uniform

1 motion. ... The geokineticists [those who suppose that the earth moves] would then admit that of  
2 all the motions in the earthly region the swiftest is the rotation of the earth. In a short time it  
3 performs so vast a rotation. As a result, everything not attached to it would appear to be always  
4 moving in the direction opposite the earth's. Not a cloud nor any other thing flying or thrown  
5 upward would ever be floating eastward. For the earth would always outstrip them all as it  
6 overtook them in its eastward motion. Consequently all other bodies would seem to be traveling  
7 westward as they were left behind.

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9         On the other hand, the geokineticists might say that the air is carried around with the  
10 earth in the same direction and at the same speed. Nevertheless, whatever bodies are caught up in  
11 the air would always be seen falling behind the speed of both the earth and the air. Or if these  
12 bodies were carried around as though united with the air, they would no longer be seen either  
13 moving ahead or falling behind. On the contrary, they would always maintain the same position.  
14 Neither in the things flying or thrown would there be any dislodgment or displacement. [Yet] we  
15 do see all these things happening with such clarity that no part at all of their slowness or  
16 swiftness is attributable to the earth's failure to stand still.